



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,963	02/28/2005	Wataru Kagohashi	1150.44795X00	3136

20457 7590 09/06/2006

ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-3873

EXAMINER

MAI, NGOCLAN THI

ART UNIT	PAPER NUMBER
----------	--------------

1742

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/525,963

Applicant(s)

KAGOHASHI ET AL.

Examiner

Ngoclan T. Mai

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/28/05</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-15 are rejected under 35 U.S.C. 102(a) as being anticipated by Ito et al. (U.S. Patent No. 6,391,084).

Ito discloses metal nickel powder comprising particles having particle size from 0.05 micron to 1.0 micron and BET preferably 1 to 20 m²/g, col. 3, l. 51-63. The shape of nickel powder is preferably sphere in order to improve sintering properties and dispersion characteristics, col. 3, l. 63-65.

The nickel powder has an oxygen content in the range of from 0.1 to 2.0% by weight, col. 3, l. 21-25 and an oxide films thickness of more than 2 nm to 5 nm, col. 4, l. 59-61.

Ito et al, however does not teach the nickel powder is treated in carbonic acid water solution, however there is no distinction between the claimed metallic nickel powder and the powder of Ito. The powder of Ito therefore anticipates the claimed Ni powder.

Art Unit: 1742

3. Claims 1-5, 8-12, 14-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Kagohashi et al. (U.S. Patent No. 6,863,708).

The applied reference has a common inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

The reference discloses the claimed metallic nickel powder which has been treated with carbonic acid water, wherein the nickel powder has an oxygen content in the range of 0.1 to 1% and a uniform oxide layer having a thickness of about few nm on its surface, col. 6, l. 60-67. The nickel powder desirably has particle size less than 1.0 micron, advantageously from 0.1 to 0.4 micron and having specific surface area by BET in the range of 1 to 40 m²/g, col. 4, l. 25-32.

As for claim 4, while the reference does not teach the shape of Ni powder, US patent No. 6,168,752 disclose Ni powder produced by reacting nickel chloride with reducing gas has spherical shape. Therefore since the reference's Ni powder is produced by the same method as the US patent No. 6,168,752, it inherently has spherical shape. As for claim 5, the nickel powder is produced by reacting nickel chloride gas and reducing gas, col. 3, l. 34-38.

As for claims 8-10, the nickel powder is put in pure water to form water slurry; carbonic acid gas is dissolved in the water slurry to prepare a carbonic acid aqueous solution; and the washing process is conducted, col. 5, l. 18-30. As for claims 11-12, The treatment in carbonic acid water solution is conducted at temperature between 10 to 60 C at a pH of 5 to 6.5, col. 6, l. 4-5 and col. 5, l. 46-48.

As for claims 14-15, the reference teaches the its utilities as conductive paste for a multilayer ceramic capacitor.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6, 7, 13, 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kagohashi et al. (U.S. Patent No. 6,863,708) in view of Ito (U.S. Patent No. 6,391,084.)

The difference between Kagohashi et al. and the claims are that Kagohashi does not specifically teach heating treating the carbonic acid washed nickel powder in air.


Ito teaches in the metal nickel powder where nickel powder after being formed reacting nickel chloride gas with reducing agent and washed is heated in a temperature range of 200 to 400 C in oxidizing atmosphere to form uniform oxide film, col. 6, l. 23-45. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to heat treating the nickel powder taught by Kagohashi after being carbonic acid washed, in air and at the temperature taught by Ito to form strong oxide film on the nickel powder in order to obtain nickel powder having improvement in the initiation temperature for sintering.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoclan T. Mai whose telephone number is (571) 272-1246. The examiner can normally be reached on 9:30-6:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1742

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Ngoclan T. Mai
Primary Examiner
Art Unit 1742

n.m.